

allergic, inflammatory, or due to irritation by inspired pollutants.

3. *Bronchitis* should be considered an inflammatory condition of the bronchial tree manifested by cough, productive of mucoid or purulent sputum. As Peshkin says, in chronic cases, asthma is the basic disease state.

4. *Emphysema*, instead of a disease entity per se, should be restricted to identifying an anatomical state characterized by overdistention of alveoli and disruption of inter-alveolar septa.

Dr. Rapaport and Peshkin have, I am sure, made a notable contribution to treatment of obstructive lung disease. Clarification of terminology is the first step in progress toward its conquest.

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Not Method but Fortuity

To the Editor: With respect to your recent Specialty Conference on Carcinoma of the Breast [Calif Med 113:46-62, Sep 1970], I should like to comment on the meaning of the rate of survival. It is evident that the rate of survival is affected by the distribution of tumor at the time of treatment. Thus tumor in axillary lymph nodes regularly portends an unfavorable result, and stage IV patients have a lower survival than stage II patients. It is also evident that tumor in the resected specimen cannot recur within the patient. If all of the tumor lies within the resected specimen, the patient is cured, whereas if some of the tumor has progressed beyond the resected specimen, metastatic disease is virtually certain. Whether the patient survives or succumbs therefore depends on the distribution of tumor vis-a-vis the tissue ablated by the method of treatment. These factors also apply to a series of patients, and for this reason the rate of survival is not the accomplishment of the method as has been generally presumed, but is the proportion of patients in

which all of the tumor lay within the tissue ablated by the method.

This definition precludes identifying the superior method by comparing survival rates. For example, if the tumor was localized within the tissue ablated by the method in 40 percent of the cases in one series, and in 60 percent in another series, there is no way to discern which method ablated tumor from the larger amount of tissue. The higher result could have been due to a method that ablated tumor from a small amount of tissue and frequently succeeded because the tumor was localized about the primary site in a high proportion of the patients, while the lower result could have been due to a method that eradicated tumor from a large amount of tissue but frequently failed because the tumor was widespread in many of the cases. Therefore, the rate of survival does not reveal the accomplishment of the method, a comparison of survival rates is not a comparison of therapeutic accomplishments, and a high rate of survival does not necessarily mean a superior method of treatment. Moreover, comparing the proportion of patients in which all of the tumor lay within the tissue ablated by the method is not a plausible way to identify the superior method of treatment. The analysis of results of carcinoma of the breast is therefore not a statistical problem; it is a conceptual one, and it centers on the error of assuming that the rate of survival expresses the accomplishment of the method. It is this error that has precluded such comparisons from revealing the superior method in the past, and renders this exercise futile in the future as well.

Since malignant tumor arises at a localized nidus and thereafter spreads away from that site with the passage of time, the method that eradicates tumor from the largest amount of tissue at the earliest moment will provide the best result. The method cannot be so radical as to jeopardize the recovery of the patient, however, not so conservative as to allow recurrence because of failure to ablate tumor from expendable tissue. The method should be selected according to the principle of treatment rather than according to the rate of the survival.

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